Southern Thunder 2009 (ST09) Workshop

Cocoa Beach, Florida, USA
28 – 30 July 2009

You are invited to attend the **Southern Thunder 2009 (ST09)** Workshop jointly convened by NASA's Short-term Prediction Research and Transition Center (SPoRT), the National Weather Service, the National Satellite and Information Service (NESDIS), and Vaisala, Inc. The Southern Thunder 2009 Workshop will be held in Cocoa Beach, Florida on 28 – 30 July 2009. This Workshop is a follow-up to the Southern Thunder 2005 (ST05) Workshop held in Fort Worth, Texas in July 2005. Information on ST05 can be found at the website http://www.ghcc.msfc.nasa.gov/sport/sport_meetings.html. These workshops are driven by new opportunities in the U.S. to observe total lightning activity by ground-based systems in Arizona, New Mexico, Oklahoma, Texas, Alabama, Florida, and the Washington, D.C. area. Additionally, these workshops aim to deliver real-time data products to NWS forecaster workstations within the areas covered by these systems. This workshop will continue with the goals of the earlier workshops to

- Bring the data and product producers together with the product and decision-making consumers,
- Form collaborations to advance the scientific understanding of thunderstorm processes, and
- Develop and evaluate nowcasting and warning decision-making applications that use total lightning in an operational environment.

Science and algorithm risk reduction performed now and in the coming years will help accelerate the transition to operations for new satellite observations from the planned Geostationary Lightning Mapper (GLM) on GOES-R, and to better understand the operational value provided by ground-based total lightning detection networks today.

During the Cocoa Beach ST09 Workshop we will have presentations addressing the following topics:

1) Owner-operator reports on existing systems;
2) Operational products and experiences using total lightning mapping data;
3) Results from prior short-duration scientific field programs and operational demonstrations of the value-added from total lightning data in an operational forecast office; and
4) Breakout discussions to develop a project plan for conducting future Southern Thunder Workshops, participation in future field experiments and deployments, develop new and advanced products, applications, and services, and maintaining and building upon ongoing government, university and private industry collaborations and operations.

The format will be that of a workshop, with a limited number of invited and contributed presentations allowing time for open discussion. We are creating a website that will be online by 1 December 2008: http://weather.msfc.nasa.gov/sport/southernthunder. This website will contain information on the workshop agenda and deadlines, the ability for invitees to register for ST09 and reserve hotel rooms, and information about ST09 activities.

Southern Thunder 2009 Preliminary Agenda

The ST09 Workshop will include presentations and discussions of the following topics:

I: Status reports on total lightning networks

1) Overview of each U.S. total lightning network, including basic network information (coverage, # stations, etc.), products produced by each network, users of the data, network problems, and future network plans (e.g., expansions, refinements)
2) Brief overview of Geostationary Lightning Mapper (GLM) characteristics

II: Operational Aspects of total lightning measurements

1) Operational products and services
2) Experiences of forecasters using total lightning data
3) Display and visualization of total lightning data in operations

III: Total Lightning Research, Applications, and Issues

1) Lightning forecasting
2) Total lightning/radar studies
3) Using total lightning to nowcast storm severity
4) Assimilation of total lightning into numerical models
5) GLM studies

IV: Open discussions following the sessions

1) Product definition and generation
2) Management of WES cases, training and assessment
3) Network operations issues
4) Operational demonstration of experimental products and applications (including AWIPS II)
5) Planning for future field campaigns/experiments
6) Encourage collaborations to enable forecasters to better utilize total lightning data in an operational setting